

SCAPCA ORDER  
ISSUED IN ACCORDANCE WITH  
RCW 70.94.141 - RCW 70.94.170 AND SCAPCA REGULATION 1,  
SECTION 2.01, 2.02, AND 2.05

ORDER #96-03

ORDER TO ESTABLISH VOLUNTARY EMISSIONS LIMITS FOR KAISER ALUMINUM  
& CHEMICAL CORPORATION'S REMELT FURNACES PURSUANT TO WAC 173-400-  
091

DATE: April 24, 1996

ISSUED TO: Kaiser Aluminum & Chemical Corporation

SITE LOCATION: Trentwood Works  
15000 E Euclid Avenue  
Spokane, Wa

FACILITY CONTACT: Pat Blau  
(509) 927-6350

MAILING ADDRESS: PO Box 15108  
Spokane, Wa 99215-5108

SOURCE: 10 Remelt Melter Furnaces: RM(M) (1), RM(M)-2E,  
RM(M)-2W, RM(M)-3, RM(M)-4, RM(M)-5, RM(M)-6,  
RM(M)-7, RM(M)-8E, RM(M)-8W  
Secondary Aluminum Production Facility

Kaiser Aluminum & Chemical Corporation (Kaiser) operates a secondary aluminum production facility at 15000 E. Euclid Avenue, Spokane, Wa.

Kaiser's remelt melter furnaces (furnaces) collectively have the potential to emit 428 tons of particulate matter (PM) per year as calculated assuming maximum allowable emissions of 0.1 grains per dry standard cubic foot. As part of the attainment demonstration in the State Implementation Plan (SIP) emissions were modeled, including those from Kaiser's remelt melter furnaces. The remelt melter furnace's assumed emissions for this modeling were much higher than actual emissions but much lower than the furnaces' potential to emit. In an effort to maintain the validity of the SIP attainment demonstration, Kaiser has voluntarily requested that PM10 emissions from the remelt melter furnaces be limited to a

level such that Kaiser's potential to emit will be equal to or less than the levels used for the SIP modeling. As allowed in WAC 173-400-091, Kaiser has requested, in Raymond J. Milchovich's letter, dated August 8, 1995, voluntary emission limits on the remelt furnaces' potential to emit.

Kaiser has done extensive testing to establish an alternate opacity limit for the remelt melter furnaces. This testing yielded a correlation between opacity and grainloading. The alternate opacity limit, set forth in SCAPCA Order 91-01, correlates to a grainloading of 0.068 which corresponds to daily PM emissions of 1590 pounds. The opacity/grainloading correlation was used to establish Equations 1-3 below.

Kaiser's request has been reviewed by SCAPCA. The following potential to emit limitation shall be met by the facility as required in F. below:

1. PM10 emissions from all remelt melter furnaces; RM(M)-1, RM(M)-2E, RM(M)-2W, RM(M)-3, RM(M)-4, RM(M)-5, RM(M)-6, RM(M)-7, RM(M)-8E, RM(M)-8W, combined shall not exceed 1590 pounds per day.

To ensure that the above emission limit is met, the facility shall meet the following:

A. Compliance with the daily PM10 limit shall be determined using each furnace's opacity monitor in the following manner. For each furnace, a day (24 hour period beginning at midnight at ending at the following midnight) will be broken into six (6) consecutive four (4) hour time blocks to represent theoretical furnace cycles. For each furnace,  $i$ , each four (4) hour block,  $j$ , shall be processed to obtain the maximum average opacity for any one hour interval during that four hour period,  $OP_{ij}$ . This value shall then be used in equation #1 to calculate that furnace's PM grainloading for that four (4) hour block,  $GL_{ij}$ :

Equation 1

$$GL_{ij} = 0.003694 * OP_{ij} + 0.004699$$

where  $GL_{ij}$  = PM grainloading in grains per dry standard cubic foot for the  $i^{th}$  furnace for the  $j^{th}$  four (4) hour block  
 $OP_{ij}$  = highest 60 minute average opacity for the  $i^{th}$  furnace for the  $j^{th}$  four (4) hour block

Equation #2 shall be used to calculate PM emissions in pounds,  $PM_{ij}$ , from the  $i^{th}$  furnace, for the  $j^{th}$  four (4) hour period during each day. The airflow for each furnace,  $AF_{ij}$ , shall be based on furnace design flow rates, taking into account operating conditions and other factors affecting flow, and shall be in terms of dry standard

cubic feet per minute.

Equation 2

$$PM_{ij} = \frac{GL_{ij} * AF_i * 60 * 4}{7000}$$

Equation 3 shall be used to calculate daily PM emissions in pounds for all furnaces combined, PM.

Equation 3

$$PM = \sum_{i=1}^{10} \sum_{j=1}^6 PM_{ij}$$

PM10 emissions shall be assumed to equal PM emissions unless Kaiser provides appropriate technical documentation to establish otherwise as allowed in E. below.

If opacity monitor data are not available for an operating furnace, OP<sub>ij</sub>, for the furnace shall be estimated using the highest OP<sub>ij</sub> measured by the other opacity monitors on operating furnace for that period.

B. By the 15th day of each month, Kaiser shall submit to SCAPCA a report listing the previous month's daily emissions for all remelt melter furnaces combined (PM) and total emissions for that month.

C. Kaiser shall maintain all records for a period of two years.

D. SCAPCA may require testing to verify compliance with the 1590 pounds per day PM10 emission limit. Testing shall be done in accordance with EPA reference methods as found in 40 CFR Part 51 (1995). Emissions shall be determined from the average of three valid test runs, each representing one furnace cycle.

E. Upon submittal of appropriate technical documentation, SCAPCA may revise the method used to calculate PM and PM10 emissions from the remelt melter furnaces.

F. This order shall take effect upon completion of the following:

a. EPA approval of SCAPCA Order 91-01 as part of the Washington State Implementation Plan; and

b. completion of the following:

i. submission to and approval by the Control Officer of a report demonstrating that the opacity monitor(s) installed on the furnace(s) meets the performance specifications set forth in 40 CFR Part 60, Appendix B,

Performance Specification 1 (1990);

- ii. approval by the Control Officer of a quality assurance plan for the opacity monitor(s); and
- iii. commencement of continuous operation of the monitor(s).

The above may be demonstrated separately for each furnace.

Any proposed deviation from this order shall require revision or revocation of this order. The revision or revocation shall occur prior to the deviation.

This order does not relieve the proponent of the obligation to comply with all other applicable federal, state and local regulations and requirements.

The provisions of this authorization are severable and, if any provision of this order, or the application of any provision of this order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this order shall not be affected thereby.

This order may be appealed to

Pollution Control Hearings Board  
c/o Environmental Hearings Office  
PO Box 40903  
4224 6th Avenue SE, Building #2, Rowe Six  
Lacey, Wa 98504-0903

Appeals must be filed within 30 days after receipt of this order. Concurrently a copy of the appeal must be sent to the Spokane County Air Pollution Control Authority, West 1101 College Avenue, Room 403, Spokane, Wa 99201.

ORDERED BY:

  
ERIC P. SKELTON  
DIRECTOR

SCAPCA ORDER  
ISSUED IN ACCORDANCE WITH  
RCW 70.94.141 - RCW 70.94.170 AND SCAPCA REGULATION 1,  
SECTION 2.01, 2.02, AND 2.05

ORDER #96-04

ORDER TO ESTABLISH VOLUNTARY EMISSIONS LIMITS FOR KAISER ALUMINUM  
& CHEMICAL CORPORATION'S SKIM COOLER PURSUANT TO WAC 173-400-091

DATE: April 24, 1996  
DATE MODIFIED: May 8, 1996 (correction to Order #)  
ISSUED TO: Kaiser Aluminum & Chemical Corporation  
SITE LOCATION: Trentwood Works  
15000 E Euclid Avenue  
Spokane, Wa  
FACILITY CONTACT: Pat Blau  
(509) 927-6350  
MAILING ADDRESS: PO Box 15108  
Spokane, Wa 99215-5108  
SOURCE: Skim Cooler, RM-20  
Secondary Aluminum Production Facility

Kaiser Aluminum & Chemical Corporation (Kaiser) operates a secondary aluminum production facility at 15000 E. Euclid Avenue, Spokane, Wa.

Kaiser's skim cooler has the potential to emit about 22 tons of particulate matter (PM) per year as calculated assuming maximum allowable emissions of 0.025 grains per dry standard cubic foot. As part of the attainment demonstration in the State Implementation Plan (SIP), emissions were modeled, including those from Kaiser's skim cooler. Kaiser's assumed emissions for this modeling exercise were higher than actual emissions but much lower than the potential to emit. In an effort to maintain the validity of the SIP attainment demonstration, Kaiser has voluntarily requested that PM10 emissions from the skim cooler be limited to a level such that Kaiser's potential to emit will be equal to or less than the levels used for the SIP modeling. As allowed in WAC 173-400-091, Kaiser has requested, in Raymond J. Milchovich's letter, dated August 8,

1995, voluntary emission limits on the skim cooler's potential to emit.

Source testing at the facility has shown that PM emissions are below 0.01 grains per dry standard cubic foot, corresponding to 50.0 pounds of PM emitted per day.

Kaiser's request has been reviewed by SCAPCA. The following potential to emit limitation shall be met by the facility as required in D. below:

1. PM10 emissions from the skim cooler shall not exceed 50.0 pounds per day.

To ensure that the above emission limit is met, the facility shall meet the following:

A. SCAPCA may require testing to verify compliance with the 50.0 pounds per day PM10 emission limit. Testing shall be done in accordance with EPA reference methods as found in 40 CFR Part 51 (1995). PM emissions shall be determined from the average of three valid 1-hour, or longer, test runs.

PM10 emissions shall be assumed to equal PM emissions unless Kaiser provides appropriate technical documentation to demonstrate otherwise. Upon submittal of such documentation, SCAPCA may revise the method for determining PM10 emissions.

B. An operation and maintenance plan for the skim cooler baghouse shall be developed and submitted to SCAPCA for approval within 30 days of the effective date of this order. The plan shall include, at a minimum:

- routine maintenance activities, required to keep the control system in proper operating condition, including manufacturer recommended operation and maintenance procedures
- a description of recordkeeping activities, including those records being kept, method(s) of recordkeeping, and length of time that records are kept.

C. Maintenance records shall be kept for the baghouse. Compliance with this condition may be demonstrated by implementing a computerized preventative maintenance system that regularly schedules and tracks maintenance activities. All records shall be kept for a minimum of two years.

D. This order shall take effect upon EPA approval of SCAPCA Order 91-01 as part of the Washington State Implementation Plan.

Any proposed deviation from this order shall require revision or revocation of this order. The revision or revocation shall occur prior to the deviation.

This order does not relieve the proponent of the obligation to comply with all other applicable federal, state and local regulations and requirements.

The provisions of this authorization are severable and, if any provision of this order, or the application of any provision of this order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this order shall not be affected thereby.

This order may be appealed to

Pollution Control Hearings Board  
c/o Environmental Hearings Office  
PO Box 40903  
4224 6th Avenue SE, Building #2, Rowe Six  
Lacey, Wa 98504-0903

Appeals must be filed within 30 days after receipt of this order. Concurrently a copy of the appeal must be sent to the Spokane County Air Pollution Control Authority, West 1101 College Avenue, Room 403, Spokane, Wa 99201.

ORDERED BY:

  
ERIC P. SKELTON  
DIRECTOR

SCAPCA ORDER  
ISSUED IN ACCORDANCE WITH :

RCW 70.94.141 - RCW 70.94.170 AND SCAPCA REGULATION 1,  
SECTION 2.01, 2.02, AND 2.05

ORDER #96-05

ORDER TO ESTABLISH VOLUNTARY EMISSIONS LIMITS FOR KAISER ALUMINUM  
& CHEMICAL CORPORATION'S REMELT HOLDERS PURSUANT TO  
WAC 173-400-091

DATE: April 24, 1996  
DATE MODIFIED: May 8, 1996 (correction to Order #)  
ISSUED TO: Kaiser Aluminum & Chemical Corporation  
SITE LOCATION: Trentwood Works  
15000 E Euclid Avenue  
Spokane, Wa  
FACILITY CONTACT: Pat Blau  
(509) 927-6350  
MAILING ADDRESS: PO Box 15108  
Spokane, Wa 99215-5108  
SOURCE: Remelt Holders: RM(H)-1, RM(H)-2, RM(H)-3,  
RM(H)-4, RM(H)-5, RM(H)-6, RM(H)-7, RM(H)-8  
Secondary Aluminum Production Facility

Kaiser Aluminum & Chemical Corporation (Kaiser) operates a secondary aluminum production facility at 15000 E. Euclid Avenue, Spokane, Wa.

Kaiser's remelt holders have the potential to emit about 101 tons of particulate matter (PM) per year as calculated assuming maximum allowable emissions of 0.1 grains per dry standard cubic foot. As part of the attainment demonstration in the State Implementation Plan (SIP), emissions were modeled, including those from Kaiser's remelt holders. Kaiser's assumed emissions for this modeling exercise were higher than actual emissions but much lower than the potential to emit. In an effort to maintain the validity of the



SIP attainment demonstration, Kaiser has voluntarily requested that PM10 emissions from the remelt holders be limited to a level such that Kaiser's potential to emit will be equal to or less than the levels used for the SIP modeling. As allowed in WAC 173-400-091, Kaiser has requested, in Raymond J. Milchovich's letter, dated August 8, 1995, voluntary emission limits on the remelt holders' potential to emit.

A dry scrubbing/baghouse system is currently being designed and installed to control the emissions from the remelt holders. Once installed, emissions from the remelt holders will not exceed 0.015 grains per dry standard cubic foot as required in Notice of Construction #660. The grainloading standard of 0.015 corresponds to 83.0 pounds of PM emitted per day.

The request has been reviewed by SCAPCA. The following potential to emit limitation shall be met by the facility as required in F. below:

1. Total PM10 emissions from the 8 remelt holders; RM(H)-1, RM(H)-2, RM(H)-3, RM(H)-4, RM(H)-5, RM(H)-6, RM(H)-7, RM(H)-8 shall not exceed 83.0 pounds per day.

To ensure that the above emission limit is met, the facility shall meet the following:

- A. Emissions from the 8 remelt holders listed in 1. above shall be controlled using the dry scrubbing/baghouse system.

- B. Visible emissions from the dry scrubbing/baghouse system, as measured using EPA Method 9, shall not exceed 10% for an aggregate of more than three minutes in any one hour period. Visible emissions from the dry scrubbing/baghouse system, as determined by the continuous opacity monitor, shall not exceed an average of 10% for any three minute period. The opacity monitor data shall be collected in accordance with 40 CFR 60.13 (1995) except that one cycle of data recording shall be a three minute average and each three minute average shall be calculated from 18 or more datapoints, equally spaced over each three minute period.

- C. SCAPCA may require testing to verify compliance with the 83.0 pounds per day PM10 emission limit. Testing shall be done in accordance with EPA reference methods as found in 40 CFR Part 51 (1995). PM emissions shall be determined from the average of three valid 1-hour, or longer, test runs.

PM10 emissions shall be assumed to equal PM emissions unless Kaiser provides appropriate technical documentation to demonstrate otherwise. Upon submittal of such documentation, SCAPCA may revise the method for determining PM10 emissions.

D. An operation and maintenance plan for the dry scrubbing/baghouse control system shall be developed and submitted to SCAPCA for approval within 30 days of start-up of the dry scrubbing/baghouse system. The plan shall include, at a minimum:

- routine maintenance activities, required to keep the control system in proper operating condition, including manufacturer recommended operation and maintenance procedures
- a description of recordkeeping activities, including those records being kept, method(s) of recordkeeping, and length of time that records are kept.

E. Maintenance records shall be kept for the baghouse. Compliance with this condition may be demonstrated by implementing a computerized preventative maintenance system that regularly schedules and tracks maintenance activities. All records shall be kept for a minimum of two years.

F. This order shall take effect after:

- i) October 31, 1996; and
- ii) EPA approval of SCAPCA Order 91-01 as part of the Washington State Implementation Plan.

Any proposed deviation from this order shall require revision or revocation of this order. The revision or revocation shall occur prior to the deviation.

This order does not relieve the proponent of the obligation to comply with all other applicable federal, state and local regulations and requirements.

The provisions of this authorization are severable and, if any provision of this order, or the application of any provision of this order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this order shall not be affected thereby.

This order may be appealed to

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c/o Environmental Hearings Office  
PO Box 40903  
4224 6th Avenue SE, Building #2, Rowe Six  
Lacey, Wa 98504-0903

Appeals must be filed within 30 days after receipt of this order. Concurrently a copy of the appeal must be sent to the Spokane

County Air Pollution Control Authority, West 1101 College Avenue,  
Room 403, Spokane, Wa 99201.

ORDERED BY:

  
ERIC P. SKELTON  
DIRECTOR

SCAPCA ORDER  
ISSUED IN ACCORDANCE WITH :  
RCW 70.94.141 - RCW 70.94.170 AND SCAPCA REGULATION I,  
SECTION 2.01, 2.02, AND 2.05

ORDER #96-06

ORDER TO ESTABLISH VOLUNTARY EMISSIONS LIMITS FOR KAISER ALUMINUM  
& CHEMICAL CORPORATION'S INDUCTION FURNACES PURSUANT TO  
WAC 173-400-091

DATE: April 24, 1996  
DATE MODIFIED: May 8, 1996 (correction to Order #)  
ISSUED TO: Kaiser Aluminum & Chemical Corporation  
SITE LOCATION: Trentwood Works  
15000 E Euclid Avenue  
Spokane, Wa  
FACILITY CONTACT: Pat Blau  
(509) 927-6350  
MAILING ADDRESS: PO Box 15108  
Spokane, Wa 99215-5108  
SOURCE: Induction Furnaces, RM-21  
Secondary Aluminum Production Facility

Kaiser Aluminum & Chemical Corporation (Kaiser) operates a secondary aluminum production facility at 15000 E. Euclid Avenue, Spokane, Wa.

Kaiser's induction furnaces have the potential to emit about 76.2 tons of particulate matter (PM) per year as calculated assuming maximum allowable emissions of 0.1 grains per dry standard cubic foot. As part of the attainment demonstration in the State Implementation Plan (SIP), emissions were modeled, including those from Kaiser's induction furnaces. Kaiser's assumed emissions for this modeling exercise were higher than actual emissions but much lower than the potential to emit. In an effort to maintain the validity of the SIP attainment demonstration, Kaiser has voluntarily requested that PM10 emissions from the induction furnaces be limited to a level such that Kaiser's potential to emit will be equal to or less than the levels used for the SIP modeling.

As allowed in WAC 173-400-091, Kaiser has requested, in Raymond J. Milchovich's letter, dated August 8, 1995, voluntary emission limits on the skim cooler's potential to emit.

Source testing at the facility has shown that PM emissions from the induction furnaces are less than 0.020 grains per dry standard cubic foot, corresponding to 83.0 pounds of PM emitted per day.

The request has been reviewed by SCAPCA. The following potential to emit limitation shall be met by the facility as required in E. below:

1. PM10 emissions from the two induction furnaces combined shall not exceed 83.0 pounds per day.

To ensure that the above emission limit is met, the facility shall meet the following:

A. Visible emissions, as measured by EPA Reference Method 9, shall not exceed 10% for an aggregate of more than three minutes in any one hour period.

B. SCAPCA may require testing to verify compliance with the 83.0 pounds per day PM10 emissions limit. Testing shall be done in accordance with EPA reference methods as found in 40 CFR Part 51 (1995). PM emissions shall be determined from the average of three valid 1-hour, or longer, test runs.

PM10 emissions shall be assumed to equal PM emissions unless Kaiser provides appropriate technical documentation to demonstrate otherwise. Upon submittal of such documentation, SCAPCA may revise the method for determining PM10 emissions.

C. An operation and maintenance plan for the induction furnaces' baghouse shall be developed and submitted to SCAPCA for approval within 30 days of the effective date of this order. The plan shall include, at a minimum:

- routine maintenance activities, required to keep the control system in proper operating condition, including manufacturer recommended operation and maintenance procedures
- a description of recordkeeping activities, including those records being kept, method(s) of recordkeeping, and length of time that records are kept.

D. Maintenance records shall be kept for the baghouse. Compliance with this condition may be demonstrated by implementing a computerized preventative maintenance system that regularly schedules and tracks maintenance activities. All records shall be

kept for a minimum of two years.

E. This order shall take effect upon EPA approval of SCAPCA Order 91-01 as part of the Washington State Implementation Plan.

Any proposed deviation from this order shall require revision or revocation of this order. The revision or revocation shall occur prior to the deviation.

This order does not relieve the proponent of the obligation to comply with all other applicable federal, state and local regulations and requirements.

The provisions of this authorization are severable and, if any provision of this order, or the application of any provision of this order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this order shall not be affected thereby.

This order may be appealed to

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Lacey, Wa 98504-0903

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ORDERED BY:

  
ERIC P. SKELTON  
DIRECTOR